

### **AMENDMENTS TO THE CLAIMS**

The following listing of Claims will replace all prior versions, and listings, of Claims in the application:

#### **Listing of Claims:**

1-57. (Canceled).

58. (Currently amended) A method for replacing a first sub-hierarchy of at least two sub-hierarchies of a hierarchical filesystem (HFS) with a second sub-hierarchy of the at least two sub-hierarchies, the HFS having a single parentless root directory and being accessible by at least one processor, wherein the HFS provides a mapping between a disk sector and user data, further wherein the HFS implementation is a New Technology File System (NTFS) implementation, the HFS is provided with file records storing directory attribute data corresponding with the first and second sub-hierarchies, the method comprising the steps of:

providing for the first sub-hierarchy to include a first root directory located in a first location of the HFS associated with the single parentless root directory of the HFS through at least one internal pointer, wherein the first sub-hierarchy includes a first plurality of files configured to branch from the first root directory and at least one special system file which is exclusive to the parentless root directory;

providing for the second sub-hierarchy to include a second root directory located in a second location of the HFS, wherein the second sub-hierarchy includes a second plurality of files configured to branch from the second root directory and the second root directory is provided with at least one placeholder file which corresponds to each of the special system files;

providing the first and second root directories with at least one file entry, each of which are provided with corresponding owning directories, and the respective owning directories are provided with corresponding back-pointers; and

replacing the first sub-hierarchy with the second sub-hierarchy comprising the step of:

associating the second root directory and the single parentless root directory of the HFS through the at least one internal pointer, wherein the associating step further comprises the steps of:

configuring of the first plurality of files to branch from the first root directory including once the first root directory is accessed through the second location;

exchanging owning directories corresponding to the file entries of the first root directory with owning directories corresponding to the file entries of the second root directory;

exchanging the owning directory back-pointers of the first root directory with corresponding owning directory back-pointers of the second root directory;

exchanging at least one directory pointer corresponding to the at least one special system file with at least one directory pointer corresponding to the at least one placeholder file; and

exchanging directory attribute data of the file record associated with the first root directory with directory attribute data associated with the second root directory.

59. (Previously presented) The method according to claim 58, wherein the associating step further comprises the step of reconfiguring the second plurality of files to branch from the second root directory when the second root directory is accessed through the first location.

60-62. (Canceled).

63. (Previously presented) The method according to claim 58, wherein the associating step is performed without copying content of the first or second plurality of files.

64. (Previously presented) The method according to claim 58, wherein the first and second sub-hierarchies are mutually exclusive.

65. (Previously presented) The method according to claim 58, further comprising the step of manipulating the at least one pointer of the HFS for replacing selectable portions of data from the first sub-hierarchy with corresponding data from the second sub-hierarchy.

66. (Previously presented) The method according to claim 58, wherein the HFS is a readable file system throughout the associating step.

67. (Previously presented) The method according to claim 58, further comprising the step of providing for first and second operating systems associated with first and second sub-hierarchies respectively, the first and second operating systems being executable on the at least one processor in the respective first and second sub-hierarchies.

68. (Previously presented) The method according to claim 58, wherein the physical location of the first and second root directories is unchanged by and after the associating step.

69. (Previously presented) The method according to claim 58, the step of allowing access by an operating system executed on the at least one processor to at least one of the first and second sub-hierarchies when at least one of the first and second sub-hierarchies is associated with the single parentless root directory of the HFS.

70. (Previously presented) The method according to claim 58, wherein the HFS resides upon a single storage medium selected from the group of storage media consisting of physical and virtual storage media.

71. (Previously presented) The method according to claim 70, wherein the storage medium is a disk.

72. (Previously presented) The method according to claim 70, wherein the HFS resides on one of a single partition and a single volume of the medium.

73. (Previously presented) The method according to claim 58, wherein the second location is associated with a container directory branching from the root directory of the HFS.

74. (Previously presented) The method according to claim 58, wherein the content of the first sub-hierarchy includes an upgrade of content of the second sub-hierarchy.

75. (Canceled)

76. (Previously presented) The method according to claim 58, wherein the first and second sub-hierarchies provide different user environments.

77. (Previously presented) The method according to claim 58, wherein the first and second addresses of the first and second root directories are associated with first and second cluster numbers corresponding to the first and second root directories, respectively.

78. (Previously presented) The method according to claim 58, wherein the replacing is performed without altering one of an electrical and a physical connection.

79. (Canceled)

80. (Currently amended) A computer system comprising:

at least one processor;

a hierarchical filesystem (HFS) stored on a storage medium accessible by the at least one processor and including at least a first and second sub-hierarchy and a single parentless root directory, wherein the HFS provides a mapping between a disk sector and user data, further wherein the HFS implementation is a New Technology File System (NTFS) implementation, the

HFS is provided with file records storing directory attribute data corresponding with the first and second sub-hierarchies, and wherein:

the first sub-hierarchy includes a first root directory located in a first location of the HFS associated with the single parentless root directory of the HFS through at least one internal pointer, wherein the first sub-hierarchy includes a first plurality of files configured to branch from the first root directory and at least one special system file which is exclusive to the parentless root directory; and

the second sub-hierarchy includes a second root directory located in a second location of the HFS, wherein the second sub-hierarchy includes a second plurality of files configured to branch from the second root directory and at least one placeholder file which corresponds to each of the special system files, further wherein the first and second root directories are each provided with at least one file entry, the respective file entries of the first and second root directories are provided with corresponding owning directories, and the respective owning directories are provided with corresponding back-pointers; and

a set of programmable instructions executable on the at least one processor for replacing the first sub-hierarchy with the second sub-hierarchy comprising the step of:

associating the second root directory and the single parentless root directory of the HFS through the at least one internal pointer, wherein the associating step further comprises the steps of:

configuring of the first plurality of files to branch from the first root directory including once the first root directory is accessed through the second location;

exchanging owning directories corresponding to the file entries of the first root directory with owning directories corresponding to the file entries of the second root directory;

exchanging the owning directory back-pointers of the first root directory with corresponding owning directory back-pointers of the second root directory;

exchanging at least one directory pointer corresponding to the at least one special system file with at least one directory pointer corresponding to the at least one placeholder file; and

exchanging directory attribute data of the file record associated with the first root directory with directory attribute data associated with the second root directory.

81. (Previously presented) The computer system according to claim 80, wherein the associating step is performed without copying content of the first or second plurality of files.

82. (Previously presented) The computer system according to claim 80, wherein the storage system is a single storage medium selected from the group of storage media consisting of physical and virtual storage media.

83. (Previously presented) The computer system according claim 82, wherein the storage medium is a disk.

84. (Previously presented) The computer system according to claim 82, wherein the HFS resides on one of a single partition and a single volume of the storage medium.

85. (Previously presented) The computer system according to claim 80, wherein the associating step is performed without altering one of an electrical and a physical connection associated with the storage medium.

86. (Previously presented) The computer system according to claim 80, wherein the second root directory branches below from the first root directory.

87. (Previously presented) The computer system according to claim 86, wherein the HFS is a readable file system throughout the associating step.

88. (Previously presented) The computer system according to claim 80, wherein the physical location of the first and second root directories is unchanged by and after the associating step.

89-100. (Canceled).

101. (New) A method for replacing a first sub-hierarchy of a New Technology File System (NTFS) hierarchical filesystem (NTFS HFS) with a second sub-hierarchy, the NTFS HFS having a single parentless root directory, wherein the NTFS HFS provides a mapping between a disk sector and user data, the method comprising the steps of:



providing for the first sub-hierarchy to include a first root directory located in a first location of the HFS associated with the single parentless root directory of the HFS through at least one internal pointer, the first root directory having at least one special system file exclusive to the single parentless root directory, wherein the first sub-hierarchy includes a first plurality of files configured to branch from the first root directory;

providing for the second sub-hierarchy to include a second root directory located in a second location of the HFS, the second root directory having at least one placeholder file corresponding to the at least one special system file, wherein the second sub-hierarchy includes a second plurality of files configured to branch from the second root directory; and

replacing the first sub-hierarchy with the second sub-hierarchy comprising the step of:

configuring the first plurality of files to branch from the first root directory

including once the first root directory is accessed through the second location;

exchanging a first plurality of files with a second plurality of files; and

exchanging at least one directory pointer corresponding to the at least one special system file with at least one directory pointer corresponding to the at least one placeholder file.

102. (New) A method according to claim 101, wherein the NTFS HFS includes a plurality of file records storing directory attribute data corresponding with the first and second root directories;

103. (New) A method according to claim 102, wherein the first root directory includes at least one file entry including a first owning directory having a first back-pointer and the second root

directory includes at least one file entry including a second owning directory having a second back-pointer.

104. (New) A method according to claim 103, wherein the replacing step further includes the steps of:

exchanging directory attribute data of the file record associated with the first root directory with directory attribute data associated with the second root directory; and  
exchanging the owning directory back-pointers of the first root directory with corresponding owning directory back-pointers of the second root directory.

105. (New) A computer system comprising:

at least one processor;  
a New Technology File System (NTFS) hierarchical filesystem (HFS) stored on a storage medium accessible by the at least one processor and including a single parentless root directory, wherein the NTFS HFS provides a mapping between a disk sector and user data, the NTFS HFS further including:

a first sub-hierarchy having a first root directory located in a first location of the HFS associated with the single parentless root directory of the HFS through at least one internal pointer, the first root directory having at least one special system file exclusive to the single parentless root directory, wherein the first sub-hierarchy includes a first plurality of files configured to branch from the first root directory; and

a second sub-hierarchy having a second root directory located in a second location of the HFS, the second root directory having at least one placeholder file corresponding

to the at least one special system file, wherein the second sub-hierarchy includes a second plurality of files configured to branch from the second root directory; and  
a set of programmable instructions executable on the at least one processor for replacing the first sub-hierarchy with the second sub-hierarchy comprising the step of:

associating the second root directory and the single parentless root directory of the HFS through the at least one internal pointer, wherein the associating step further comprises the steps of:

configuring the first plurality of files to branch from the first root directory including once the first root directory is accessed through the second location;  
exchanging a first plurality of files with a second plurality of files; and  
exchanging at least one directory pointer corresponding to the at least one special system file with at least one directory pointer corresponding to the at least one placeholder file.

106. (New) A method according to claim 105, wherein the NTFS HFS includes a plurality of file records storing directory attribute data corresponding with the first and second root directories;

107. (New) A method according to claim 106, wherein the first root directory includes at least one file entry including a first owning directory having a first back-pointer and the second root directory includes at least one file entry including a second owning directory having a second back-pointer.

108. (New) A method according to claim 107, wherein the replacing step further includes the steps of:

exchanging directory attribute data of the file record associated with the first root directory with directory attribute data associated with the second root directory; and

exchanging the owning directory back-pointers of the first root directory with corresponding owning directory back-pointers of the second root directory.